Abstract:

Tomatoes, Licopersicum sculentum var. Thomas, at three ripeness stages classified as 4 (Breaker), 6 (Red) and 7 (Red-Ripe), were exposed to different storage conditions simulating their transport to distant countries by ship (controlled atmosphere cool-container during eleven days) and to closer countries by truck (cool-rooms during seven days) followed by a storage period of seven days in a refrigerator simulating cool-storage conditions of tomatoes at home or supermarkets after their acquisition. Firmness, colour, reducing sugars and organic acids content were evaluated at harvest, after simulated transport and after the whole storage period (simulated transport plus fridge storage). Colour was measured with a Colorimeter and expressed in the L* (Lightness), a* (green-red), b* (blue-yellow) colour space while firmness was determined with a Fruit Pressure Tester and expressed as kg/cm2. Organic acids and reducing sugars concentrations (mg/g fresh weight) were determined chromatographically with a Dionex Ion Chromatograph coupled to Conductivity and Pulsed Amperometric Detectors. According to results obtained, controlled atmosphere cool containers seemed to be an interesting alternative for sending tomatoes to distant countries, specially when harvested in the Breaker stage.